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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,509	07/13/2005	Thomas Shawn Dewitz	TS1138US	1987
23632	7590	05/29/2008	EXAMINER	
SHELL OIL COMPANY P O BOX 2463 HOUSTON, TX 772522463				TURNER, SONJI LUCAS
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/521,509	DEWITZ ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	SONJI TURNER	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 7/13/2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-15 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) \_\_\_\_\_ is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 18 January 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>1/18/2005</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:  
page 1, line 38 delete “aluminium” and replace with –aluminum—  
page 2, par. 3 (and throughout specification )delete “stabiliser” and replace with – stabilizer—  
page 8, line 19 the “preferably between 1,5 and 5,” is ambiguous; clarification is required  
page 11, line 12 delete “rorating” and replace with –rotating—.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 3 at line 2, the phrase “along at between 30 and 100%” is indefinite and does not provide a clearly defined range or limitation. For examination purposes, the pin is present between 30 and 100% of the axis [length] in the tubular housing.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 9, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Fernandes ‘558 (US Patent 3,590,558).

6. Fernandes ‘558 teaches a swirl separator (10) with a tubular housing (24), an axial inlet (46) with a swirl imparting means (44), a solid outlet opening (68) at the opposite end of the housing; a co-axial gas outlet conduit (32); and a vortex extender pin (74) along the axis of the tubular housing (figs. 1-4; col. 3, lines 27-70; col. 6, lines 1-18, 42-50, 58-70). Additionally, Fernandes ‘558 discloses at col. 3, lines 43-46 a swirl means positioned such that it decreases the swirl motion of the gas discharged from the gas outlet conduit.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandes ‘558 as applied to claim 1 above, and further in view of Cordes ‘401 (US Patent 3,675,401). The teaching of Fernandes ‘558 is set forth above with claim 1. Fernandes ‘558 does not teach a pin extending along the axis of the tubular housing at various lengths. Cordes ‘401 does teach a pin (19, 23, 20, 21, 22, 24) present along 100% of the axis of the tubular housing (figs. 1-2; col. 3, lines 28-37). As such, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use the pin disclosed in Fernandes ‘558 to prevent disruption of the gas flow patterns in the separator . One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

9. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as set forth above with the teachings of Fernandes ‘558 and Cordes ‘401. Additionally, Fernandes ‘558 discloses at col. 3, lines 43-

46 a swirl means positioned such that it decreases the swirl motion of the gas discharged from the gas outlet conduit.

10. Claims 7 and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandes '558 as applied to claim 1 above, and further in view of Barnes '709 (US Patent 5,690,709). The teachings of Fernandes '558 are set forth above but does not teach multi separator with a plurality of parallel separators or a process with the content of solids as recited in instant claim 8. Barnes '709 does teach such as shown in figure 3 and at col. 1, lines 24-35.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use separator of Fernandes '558 in the multi separator of Barnes '709 for the purpose processing the gas-solid feed stream for optimal reduction of the solids content at the quantities recited in instant claim 8. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

11. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandes '558 as set forth above with claim 5.

12. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandes '558 as set forth above with claim 6.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and is listed on PTO-892 (Notice of References Cited). The references are considered to be of interest, as the references relate to the art of gas-solid separation.

Art Unit: 1797

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonji Turner whose telephone number is 571-272-1203. The examiner can normally be reached on Monday - Friday, 10:00 am – 2:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Duane S. Smith/  
Supervisory Patent Examiner, Art Unit  
1797  
5-27-08

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05/27/08